

US 20160128632A1

## (19) United States

# (12) Patent Application Publication Wiebe et al.

### (10) Pub. No.: US 2016/0128632 A1

(43) **Pub. Date:** May 12, 2016

# (54) GARMENT INTEGRATED SENSING SYSTEM AND METHOD

(71) Applicant: **MAD Apparel, Inc.**, Redwood City, CA

(72) Inventors: Christopher John Wiebe, Redwood City, CA (US); Hamid Hameed Butt,

Redwood City, CA (US)

(21) Appl. No.: 14/937,767

(22) Filed: Nov. 10, 2015

### Related U.S. Application Data

(60) Provisional application No. 62/077,781, filed on Nov. 10, 2014.

#### **Publication Classification**

(51) Int. Cl.

A61B 5/00 (2006.01)

A61B 5/024 (2006.01)

A61B 5/04 (2006.01)

A61B 5/0408 (2006.01)

A61B 5/0496 (2006.01)

*A61B 5/0492* (2006.01) *A61B 5/11* (2006.01)

(52) U.S. Cl.

### (57) ABSTRACT

A system for monitoring biometric signals of a user comprising: a set of wireless sensor interfaces coupled to a garment, each of the wireless sensor interfaces comprising: 1) an electrode layer comprising a receiving region, 2) a positional identifier, associated with a position on the garment, and 3) a retention subsystem; a set of wireless sensor modules, each of the set of wireless sensor modules comprising: a contact region electrically coupleable to the receiving region of the electrode layer, a set of sensors configured to detect a set of biometric signal types, and a positional interrogator configured to identify the position associated with the corresponding wireless sensor interface; and a control module, communicatively coupled to the set of wireless sensor modules, wherein the control module queries a subset of the set of biometric signal types for transmission from each of the set of wireless sensor modules based on their positions.

